

Quick Review of Model System Research

Effects of Depression and Antidepressant Use on Cognitive Deficits and Functional Cognition Following Severe Traumatic Brain Injury

What is the study about?

The purpose of this study was to assess connections between cognitive impairment, (eg. abnormalities in the ability to process information quickly, poor memory or concentration), and post-traumatic brain injury depression (PTD) in the first year following a traumatic brain injury (TBI).

Who participated in the study?

This study examined 154 people who had severe TBI and were recruited from a trauma center. All participants sustained closed-head injuries. Relevant care staff used the Glasgow Coma Scale, which measures a person's conscious state, to determine whether the TBI was severe enough to meet the inclusion criteria. Participants need a score below 9 within the first 8 hours of injury.

How was the study conducted?

At six and twelve months after injury, trained research staff used cognitive, neuropsychological, and depression symptom assessments to explore how cognition may be affected by PTD. They also corrected the analysis for factors that might be associated with changes in cognition such as age, gender, race, education and use of anti-depressant medication. The investigators measured the influence of PTD on functional cognition as measured by the Functional Independence Measures cognitive battery (FIM). A statistical analysis was performed to examine factors influencing cognitive impairment and functional cognitive limitations.

What did the study find?

This study found no persuasive evidence that cognitive impairment is associated with PTD. Yet, participants with PTD had much higher functional cognitive limitations than participants without PTD. The study also found that participants on antidepressants performed worse on neuropsychological tests, which may signal an association between cognitive impairment and antidepressant use. Previous studies have implied that individuals with PTD had worse cognition than individuals without PTD. This study, however, states that many of those earlier studies did not correct for individual demographics or clinical differences in their population.

Disclaimer: The contents of this quick review have not been reviewed by the author of the original study.

The contents of this quick review were developed under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number 90DP0082). However, these contents do not necessarily represent the policy of Department of Health and Human Services, and you should not assume endorsement by the Federal Government.